

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERIC THOMAS GOHR, NILES RICHARD ROSENQUIST,
RAJENDRA KASHINATH SINGH, GREGORY JAMES STODDARD,
SHAHRZAD ZARKOOB, and
JOHANNES MARTINUS DINA GOOSSENS

Appeal 2007-0951
Application 10/740,074
Technology Center 1700

Decided: May 31, 2007

Before CATHERINE Q. TIMM, JEFFREY T. SMITH, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the Examiner's final rejection of claims 1-9 and 21-29.¹ We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2006).

¹ An oral hearing was conducted on May 9, 2007.

Appellants' invention relates to a method for reducing haze in a fire resistant polycarbonate composition. Independent claim 24 is illustrative of the invention:

24. A method for reducing haze in fire resistant polycarbonate compositions, comprising:

blending a flame retardant salt with a first polycarbonate to form a concentrate; and

blending the concentrate with a second polycarbonate and a cyclic siloxane to form a fire resistant polycarbonate composition.

The Examiner relies on the following prior art references to show unpatentability:

Mark	US 4,130,530	Dec. 19, 1978
Ogoe (Ogoe '479)	US 5,041,479	Aug. 20, 1991
Umeda	US 5,449,710	Sep. 12, 1995
Ogoe (Ogoe '280)	US 5,663,280	Sep. 2, 1997
Rosenquist	US 6,353,046 B1	Mar. 5, 2002

The Examiner made the following rejection:

Claims 1-9 and 21-29 under 35 U.S.C § 103(a) as unpatentable over Umeda in view of Rosenquist or Mark and further in view of Ogoe '280 or Ogoe '479.

ISSUE

The Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of the invention to form a fire resistant polycarbonate composition by separately blending components in the manner claimed based on various advantages disclosed in the prior art.

Appellants contend that the Examiner's rejection is based on hindsight and the Examiner's motivation to combine the applied prior art is not supported

by the teachings of the references. The issue before us is: Has the Examiner properly established a motivation to combine the references in the manner claimed and thereby established a *prima facie* case of obviousness within the meaning of 35 U.S.C § 103(a)?

For the reasons discussed below, we answer this question in the affirmative. Accordingly, we affirm the rejection of claims 1-9 and 21-29.

RELEVANT FINDINGS OF FACT

- 1) Ogoe '280 discloses preparation of a carbonate polymer composition. A master batch is initially prepared by adding an alkali metal salt to ground polycarbonate (col. 18, l. 65 - col. 19, l. 3). The master batch is then combined with a polycarbonate resin (col. 19, ll. 6-10).
- 2) Ogoe '280 teaches that the carbonate polymer compositions may contain other additives including silicones (col. 12, ll. 19 and 21).
- 3) Umeda discloses a flame retardative composition comprising a polycarbonate resin, an alkali or alkaline-earth metal salt of a perfluoroalkanesulfonic acid and an organopolysiloxane (*see Abstract*).
- 4) Mark discloses a polycarbonate composition comprising an aromatic carbonate polymer and a cyclic siloxane plasticizer (*see Abstract*).
- 5) According to Mark, the addition of the cyclic siloxane provides the advantage of reducing melt viscosity without causing degradation or an embrittling effect on the polycarbonate (col. 1, ll. 45-51).
- 6) Rosenquist discloses a fire-retardant composition comprising a polycarbonate, a fire-retardant component containing a perfluorobutane sulfonate and a cyclic siloxane (*see Abstract*).

7) Rosenquist discloses forming molten polycarbonate and then adding the perfluoroalkane sulfonate and cyclic siloxane either sequentially or in combination (col. 2, l. 62-col. 3, l. 1).

ANALYSIS AND CONCLUSIONS

The Examiner found that it would have been obvious to one of ordinary skill in the art at the time of the invention to masterbatch the polycarbonate and salts of Umeda for optimum dispersion of the flame retardants and to use the siloxanes of the secondary references to improve flame-retardance and eliminate brittleness upon molding (Answer 4).

Appellants attempt to refute the Examiner's conclusion of obviousness on the basis that the Examiner has not established the requisite motivation to combine the applied prior art in the manner claimed. We do not find Appellants' arguments and evidence persuasive for the reasons discussed below.

Appellants argue that the applied prior art fails to disclose manufacturing a pelletized concentrate (Br. 8-9).² However, claim 24 is not limited to a pelletized concentrate. Appellants have not presented convincing arguments or evidence which establishes that the claimed step of blending a salt with a first polycarbonate to form a concentrate should be narrowly construed as limited to a pelletized concentrate, or a concentrate formed by extrusion. Therefore, claim 24 cannot distinguish over the prior art methods on this basis.

² Appellants have not provided separate arguments for the claims on appeal. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have elected to decide this appeal on the basis of independent claim 24.

Appellants argue that one of ordinary skill in the art would not have combined Rosenquist with Umeda because Umeda's organopolysiloxanes require the presence of an organoxysilyl group while Rosenquist's cyclic siloxanes do no contain such groups (Br. 8). Appellants also assert that there is no motivation to combine Mark with Umeda because Mark does not disclose flame retardancy or haze reduction (Br. 9). These arguments are not persuasive because they do not address the Examiner's reasons for combining the references. For example, these arguments do not refute the Examiner's finding that one of ordinary skill in the art would have been motivated to add cyclic siloxane to Umeda's composition based on Mark's disclosure that cyclic siloxane provides the advantage of reducing melt viscosity without causing degradation or an embrittling effect on the polycarbonate. *See In re Beattie*, 974 F.2d 1309, 1312, 24 USPQ 1040, 1042 (Fed. Cir. 1992) ("As long as some motivation or suggestion to combine the references is provided by the prior art taken as a whole, the law does not require that the references be combined for the reasons contemplated by the inventor."); *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) ("The test for obviousness is not whether . . . the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art."). *See also, KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007); *In re Kahn*, 441 F.3d 977, 985-89, 78 USPQ2d 1329, 1334-38 (Fed. Cir. 2006).

Appellants rely on the Declarations of Rajendra K. Singh, one of the named inventors, in an effort to "disavow the Examiner of his notions that

there was motivation to combine the references because of certain statements that were made in the references” (Br. 13). According to Dr. Singh, the experiments in Declaration A show that “the addition of the flame retardant salt in masterbatch form does not improve the impact properties as claimed by the Examiner” (Appendix B, ¶ 7, first occurrence). Dr. Singh further states that the experiments in Declaration B demonstrate that “the addition of the cyclic siloxane to the flame retardant polycarbonate composition containing a flame retardant salt does not improve the impact properties, but instead causes a decrease in the softening temperature of the composition which is generally undesirable” (Appendix B, ¶ 7, second occurrence).

We agree with the Examiner’s finding that the Declarations are not persuasive because the experimental data is not commensurate in scope with the claims. For example, only one flame retardant salt was used in the experiments, while claim 24 broadly recites “blending a flame retardant salt with a first polycarbonate.”

ORDER

The rejection of claims 1-9 and 21-29 under 35 U.S.C § 103(a) as unpatentable over Umeda in view of Rosenquist or Mark and further in view of Ogoe ‘280 or Ogoe ‘479 is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv)(2006).

AFFIRMED

clj

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